UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/537,785	03/01/2006	Yaron Yakov	30051	4847

67801 7590 03/26/2010

MARTIN D. MOYNIHAN d/b/a PRTSI, INC.
P.O. BOX 16446
ARLINGTON, VA 22215

EXAMINER	
SWARTZ, STEPHEN S	

ART UNIT	PAPER NUMBER
3623	

MAIL DATE	DELIVERY MODE
03/26/2010	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/537,785	YAKOV, YARON	
	Examiner	Art Unit	
	STEPHEN SWARTZ	3623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 June 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-39* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-39* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This action is in response to the application filed 6 June 2005, which is a national stage entry of PCT/IL03/01044 filed 9 December 2003, which is a continuation of application 10/314198 filed 9 December 2002. Claims 1-39 are pending and have been examined.

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. Claims 25-27 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

A claimed process is eligible for patent protection under 35 U.S.C. § 101 if:

> "(1) it is tied to a particular machine or apparatus, or (2) it transforms a particular article into a different state or thing. See Benson, 409 U.S. at 70 ('Transformation and reduction of an article 'to a different state or thing' is the clue to the patentability of a process claim that does not include particular machines.'); Diehr, 450 U.S. at 192 (holding that use of mathematical formula in process 'transforming or reducing an article to a different state or thing' constitutes patent-eligible subject matter); see also Flook, 437 U.S. at 589 n.9 ('An argument can be made [that the Supreme] Court has only recognized a process as within the statutory definition when it either was tied to a particular apparatus or operated to change materials to a 'different state or thing' '); Cochrane v. Deener, 94 U.S. 780, 788 (1876) ('A process is...an act, or a series of acts, performed upon the subject-matter to be transformed and reduced to a different state or thing.').[7] A claimed process involving a fundamental principle that uses a particular machine or apparatus would not pre-empt uses of the principle that do not also use the specified machine or apparatus in the manner claimed. And a claimed process that transforms a particular article to a specified different state or thing by applying a fundamental principle would not pre-empt the use of the principle to transform any other article, to transform the same article but in a manner not covered by the claim, or to do anything other than transform the specified article." (*In re Bilski, 88 USPQ2d 1385, 1391 (Fed. Cir. 2008)*)

> Also noted in *Bilski* is the statement, "Process claim that recites fundamental principle, and that otherwise fails 'machine-or-transformation' test for whether such claim is drawn to patentable subject matter under 35 U.S.C. §101, is not rendered patent eligible by mere field-of-use limitations; another corollary to machine-or-transformation test is that recitation of specific machine or particular transformation of specific article does not transform unpatentable principle into patentable process if recited machine or transformation constitutes mere 'insignificant post-solution activity.'" (*In re Bilski, 88 USPQ2d 1385, 1385 (Fed. Cir. 2008)*) Examples of insignificant post-solution activity include data gathering and outputting. Furthermore, the machine or transformation must impose meaningful limits on the scope of the method claims in order to pass the machine-or-transformation test.

Claims 25-27 are not tied to a particular machine or apparatus nor do they transform a particular article into a different state or thing, thereby failing the machine-or-transformation test; therefore, claims 25-27 are non-statutory under § 101. It is also noted that the mere recitation of computer related items in the preamble of the claim does not constitute statutory subject matter.

With respect to claim 25 the applicants method steps recites assigning using and allocating; which fail both prong of the new Federal Circuit decision since they are not tied to and can be performed without the use of a particular apparatus, as well as not transforming any article into a different state or thing. Thus claims 25-27 are non-statutory and therefore rejected.

Appropriate correction is required.

4. Claims 1-24 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.
5. Claims 1-24 are directed towards a system for allocating resources between a provider and plurality of users. It is construed that these components are a system that lacks physical structure making it software per se and is not statutory because it is not a process, machine, manufacture, or composition of matter.

Appropriate correction is required.

6. Claims 28-32 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

7. Claims 28-32 are directed towards a system for interfacing between resource allocation platforms. It is construed that these components are a system that lacks physical structure making it software per se and is not statutory because it is not a process, machine, manufacture, or composition of matter.

Appropriate correction is required.

8. Claims 33-39 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

9. Claims 33-39 are directed towards a system for allocating resources between a provider and plurality of users. It is construed that these components are a system that lacks physical structure making it software per se and is not statutory because it is not a process, machine, manufacture, or composition of matter.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless -
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

11. Claims 1, 8-12, 14, 15, 18-20, 27, 28, and 33 are rejected under 35 U.S.C. 102(e) as being anticipated by Gray et al (US 2002/0082856).

As per claim 1, Gray et al disclose resource allocation platform (i.e., resource sharing system, ¶ 0018) for allocating resources between a provider and a plurality of users for a resource allocation price (i.e., entity requires a resource in order to meet expected load, including price entity pays for resource, ¶ 0037), the resources being duration dependent resources (i.e., the average resource allocation is the proportion of time the shared resource has been assigned to requests, ¶ 0018), the platform comprising: an agent-based interaction mechanism (i.e., mechanism of system is utilized through use of agents, ¶ 0038) for allowing said provider and said plurality of users to indicate required and surplus resources (i.e., resource allocation mechanism 72, including a bidding process between agents to supply resources, figure 8 and ¶ 0081-82), and a pricing engine, associated with said interaction mechanism, for ascertaining a resource allocation price (i.e. securing of resource by broker 82 is implemented through the concept of a holding price, ¶ 0090).

As per claim 8, Gray et al disclose resources are data communication capacity resources (i.e., physical device 18 makes up resource 16, including data storage and communication equipment, ¶ 0041).

As per claim 9, Gray et al disclose resources are one of a group comprising bandwidth, duration, rate access, CPU access, trunk access, cache memory, quality of service (i.e., request translated into specific quantity of resource and quality of service, ¶ 0109), and combinations thereof.

As per claim 10, Gray et al disclose resources comprise a plurality of different products (i.e., each service (product) consists of a linked group of tasks, each task viewed as a complex resource, ¶ 0040), each one of said products being defined by a respective duration and at least one of bandwidth, rate access, CPU access, trunk access, cache memory, and quality of service (i.e., request translated into specific quantity of resource and quality of service, ¶ 0109).

As per claim 11, Gray et al disclose an allocation engine (i.e., resource allocation mechanism 72, including resource broker 82, ¶ 0081, 0083-84) associated with said pricing engine (i.e., bidding mechanism), operable to allocate available resources using rules (i.e., resource broker 82 bids for resources based on policies previously set up, ¶ 0083), according to availability (i.e., current allocation, ¶ 0094-99) and according to respective resource cost outputs of said pricing engine (i.e., holding price of resource, ¶ 0094-99).

As per claim 12, Gray et al disclose said allocation engine is operable to allocate resources into an allocation space (i.e., the resources being bid for and obtained are stored as resource representations, ¶ 0083).

As per claim 14, Gray et al disclose allocating said available resources in such a way as to maximize a predetermined utility function (i.e., economic mechanism for setting the parameters of priority functions, including a maximum parameter, ¶ 0020-22).

As per claim 15, Gray et al disclose feedback information of achieved utilities to enhance maximization of said predetermined utility function (i.e., update function, used to update the moving average allocation parameter is invoked based upon an interval within which a resource request can be satisfied, ¶ 0137).

As per claim 18, Gray et al disclose said agent-based interaction mechanism comprises a broker agent per user and a broker agent per provider (i.e., broker is designed to achieve a purpose local to the resource, ¶ 0055, including resource broker 82, ¶ 0083).

As per claim 19, Gray et al disclose said agent based interaction mechanism further comprises an inter-provider broker agent (i.e., resource broker 82, ¶ 0083).

As per claim 20, Gray et al disclose said agent-based interaction mechanism comprises broker agents for translating requests from respective users and providers into offers and bids, therewith to interact with other broker agents (i.e., agent takes part in bidding process with other agents to supply resources, ¶ 0082).

As per claim 27, Gray et al disclose method wherein said allocating resources is also determined according to a request for a minimum amount of the time-dependent resource (i.e. parameters that determine dynamic priorities of the resources based on minimum allocation to that class, ¶ 0123).

As per claim 28, Gray et al disclose an interface, for interfacing between resource allocation platforms (i.e., (i.e., resource sharing system, executed via enterprise 10, ¶ 0018 and figure 1), comprising: an agent-based interaction mechanism for allowing said provider and said plurality of users to indicate required and surplus resources (i.e., agent to agent communication, figure 2), and a pricing engine, associated with said interaction mechanism, for ascertaining a resource allocation price, the platforms interfacing with each other over junctions (i.e., physical devices 18), the interface comprising: an agent for each platform at each junction, said agent being a part of a respective agent-based interaction mechanism (i.e., agents post requests to a blackboard 32, figure 3), and further comprising an inter-platform protocol for exchanging resource allocation data with a corresponding agent of a respective interfacing platform (i.e., agents 34 post bids to complete the process, in accordance with resources 16, ¶ 0065).

As per claim 33, Gray et al disclose resource allocation platform (i.e., resource sharing system, ¶ 0018) for allocating resources between a provider and a plurality of users for a resource allocation price (i.e., entity requires a resource in order to meet expected load, including price entity pays for resource, ¶ 0037), the resources being duration dependent

resources (i.e., the average resource allocation is the proportion of time the shared resource has been assigned to requests, ¶ 0018), the platform comprising: an agent-based interaction mechanism (i.e., mechanism of system is utilized through use of agents, ¶ 0038) for allowing said provider and said plurality of users to indicate required and surplus resources (i.e., resource allocation mechanism 72, including a bidding process between agents to supply resources, figure 8 and ¶ 0081-82), and an availability engine, associated with said interaction mechanism, for ascertaining an amount of a resource a to be allocated to the fixed price (i.e. securing of resource by broker 82 is implemented through the concept of a holding price, ¶ 0090).

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

13. Claims 2-4, 7, 16, 17, 25, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gray et al (US 2002/0082856), in view of Kirby et al (USPN 6,556,548).

As per claim 2, Gray et al does not disclose a learning mechanism for learning demand behavior of individual users, therefrom to provide said price. Kirby et al disclose network manager 50, which calculates the demand (price) for each resource and

allocates accordingly (column 10, lines 13-16 and column 5, lines 44-47). Both Gray et al and Kirby et al are concerned with effective allocation of resources in a network, therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to include a learning mechanism for learning demand behavior of individual users in Gray et al, as seen in Kirby et al, thereby allowing the agents in Gray et al to better react to changes in demand (see Kirby et al, column 3, lines 53-57), making the Gray et al system more effective.

As per claim 3, Gray et al does not disclose said demand behavior is an observed demand price curve for a respective user. Kirby et al disclose resource price determined based upon each users demand behavior (column 5, lines 35-40). Both Gray et al and Kirby et al are concerned with effective allocation of resources in a network, therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to include demand behavior is an observed demand price curve for a respective user in Gray et al, as seen in Kirby et al, thus allocating resources based upon the relative demand on all the resources in the network (see Kirby et al, column 4, lines 3-7), making the Gray et al system more robust.

As per claim 4, Gray et al does not disclose a differentiation mechanism for altering said price by applying a user based differentiation policy to said price. Kirby et al disclose a willingness to pay (WtP) policy of each user, which alters the resource price (column 5, lines 5-10 and equation 2). Both Gray et al and Kirby et al are concerned with effective

allocation of resources in a network, therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to include a differentiation mechanism for altering said price in Gray et al, as seen in Kirby et al, thus allocating resources based upon the relative demand on all the resources in the network (see Kirby et al, column 4, lines 3-7), making the Gray et al system more robust.

As per claim 7, Gray et al does not disclose demand behavior is an observed demand price behavior for a respective user, said resources comprise a plurality of different products and wherein said observed demand price behavior comprises a curve per product, said learning mechanism being operable to prepare a separate price-demand curve for each product. Kirby et al disclose resource price determined based upon each users demand behavior (column 5, lines 35-40). Kirby et al also disclose the resources are bandwidth, switching capacity, buffer occupancy, etc, wherein separate strategies exist for dividing the resource, based upon price (column 1, lines 16-23). Both Gray et al and Kirby et al are concerned with effective allocation of resources in a network, therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to include a demand price curve for a respective user and different resource products in Gray et al, as seen in Kirby et al, thus allocating resources based upon the relative demand on all the resources in the network (see Kirby et al, column 4, lines 3-7), making the Gray et al system more robust.

As per claim 16, Gray et al does not disclose said allocation engine is operable to carry out optimization of a mix within a group of products. Kirby et al discloses the algorithm calculating relative demand for each of the network resources (i.e., products), thereby maximizing the dividing of resources used (column 6, lines 25-29). Both Gray et al and Kirby et al are concerned with effective allocation of resources in a network, therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to include optimization of a mix within a group of products in Gray et al, as seen in Kirby et al, thus allocating resources based upon the relative demand on all the resources in the network (see Kirby et al, column 4, lines 3-7), making the Gray et al system more robust.

As per claim 17, Gray et al does not disclose measuring changes in utility over changes in allocation between said products, and to allocate capacity from products showing lower changes in utility to products showing higher changes in utility. Kirby et al disclose the applicability of proportional fairness extended to a network of many interconnected resources (column 7, lines 25-30), thereby able to arrive at a maximum solution, based upon the value or gradient of the utility function (column 9, lines 45-50). Both Gray et al and Kirby et al are concerned with effective allocation of resources in a network, therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to include measuring changes in utility over changes in allocation between said products in Gray et al, as seen in Kirby et al, thus allocating resources based upon the relative

demand on all the resources in the network (see Kirby et al, column 4, lines 3-7), making the Gray et al system more robust.

As per claim 25, Gray et al disclose a method of managing a time-dependent resource between at least one provider and a plurality of users (i.e., resource sharing system, ¶ 0018), said method comprising: assigning a broker agent to each provider and each user to translate requests concerning said resource into offers and bids (i.e., agent takes part in a bidding process with other agents to supply resources, ¶ 0082), and allocating resources according to a predetermined utility function based at least partly on said assigned prices (i.e., resource allocation mechanism 72, including resource broker 82, ¶ 0081, 0083-84). Gray et al does not disclose using learned demand behavior of each user to assign a price to offers and bids concerning said user. Kirby et al disclose network manager 50, which calculates the demand (price) for each resource and allocates accordingly (column 10, lines 13-16 and column 5, lines 44-47). Both Gray et al and Kirby et al are concerned with effective allocation of resources in a network, therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to include a learning mechanism for learning demand behavior of individual users in Gray et al, as seen in Kirby et al, thereby allowing the agents in Gray et al to better react to changes in demand (see Kirby et al, column 3, lines 53-57), making the Gray et al system more effective.

As per claim 26, Gray et al disclose using further differential information of each user together with a provider pricing policy to arrive at said price (i.e., resource broker 82 bids for resources based on policies previously set up, ¶ 0083).

14. Claims 5, 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gray et al (US 2002/0082856), in view of Kirby et al (USPN 6,556,548), in further view of Lumelsky et al (USPN 6,463,454).

As per claim 5, neither Gray et al nor Kirby et al disclose learning mechanism is a per-user neural network. Lumelsky et al disclose neural networks used to implement self-regulated controls (column 29, lines 41-46), which would include a learning algorithm. Gray et al, Kirby et al, and Lumelsky et al are all concerned with resource management, therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to include a per-user neural network in Gray et al, as seen in Lumelsky, in order to evaluate and control the robustness of the heuristics used in Gray et al.

As per claim 6, neither Gray et al nor Kirby et al disclose learning mechanism is a neural network assigned per a cluster of users. Lumelsky et al disclose neural networks used to implement self-regulated controls (column 29, lines 41-46). Gray et al, Kirby et al, and Lumelsky et al are all concerned with resource management, therefore it would

have been obvious to one having ordinary skill in the art at the time the invention was made to include a per-user neural network in Gray et al, as seen in Lumelsky, in order to evaluate and control the robustness of the heuristics used in Gray et al.

15. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gray et al (US 2002/0082856), in view of Semret et al (US 2003/0083926).

As per claim 13, Gray et al does not disclose allocating capacity by maximizing an overall utility along a time continuum, wherein utility components for future points along said time continuum are calculated by including terms for probabilities of bids occurring at respective ones of said future points. Semret et al disclose allocating capacity by maximizing an overall utility along a time continuum (i.e., capacity modeled in order to estimate the capacity at a future time, ¶ 0039), wherein utility components for future points along said time continuum are calculated by including terms for probabilities of bids occurring at respective ones of said future points (i.e., probabilistic model of transient behavior in the future, given the current price, ¶ 0042). Both Gray et al and Semret et al are concerned with allocation of a finite number of resources, therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to include allocating capacity by maximizing an overall utility along a time continuum in Gray et al, as seen in Semret et al, thereby ensuring that the price of the resource is fair, while discouraging resource misallocation, making the Gray et al system more robust.

16. Claims 21-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gray et al (US 2002/0082856), in view of Huberman et al (USPN 6,085,216).

As per claim 21, Gray et al does not disclose said resources are apportionable into products being portions of a total amount of said resources and wherein said price engine is operable to build in a risk cost factor to respective products, such that said cost factor is inversely related to a size of a respective portion. Huberman et al disclose the resource allocated between elements of a portfolio of solutions (column 3, lines 6-10), wherein risk is an characteristic of the solution procedure encountered when trying to maximize a utility that has an associated risk, such as allocation of resources (column 5, lines 18-25). Both Gray et al and Huberman et al are concerned with effective resource allocation, therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to include a risk cost factor in Gray et al, as seen in Huberman et al, in order to maximize a utility that has an associated risk, such as resource allocation, thus making Gray et al more robust.

As per claim 22, Gray et al does not disclose said duration-based resources are apportionable into products having different time durations and wherein said price engine is operable to build in a risk cost factor to respective products such that said cost factor is inversely related to a size of a respective time duration. Huberman et al disclose the resource allocated between elements of a portfolio of solutions (column 3, lines 6-10), wherein risk is

an characteristic of the solution procedure encountered when trying to maximize a utility that has an associated risk, including allocation of duration-based resources (column 5, lines 18-25). Both Gray et al and Huberman et al are concerned with effective resource allocation, therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to include a risk cost factor in Gray et al, as seen in Huberman et al, in order to maximize a utility that has an associated risk, such as resource allocation, thus making Gray et al more robust.

As per claims 23 and 24, Gray et al does not disclose said duration-based resources are apportionable into products having different bandwidths and wherein said price engine is operable to build in a risk cost factor to respective products such that said cost factor is inversely related to a size of a respective bandwidth. Huberman et al disclose the resource allocated between elements of a portfolio of solutions (column 3, lines 6-10), wherein risk is an characteristic of the solution procedure encountered when trying to maximize a utility that has an associated risk, including allocation bandwidth resources (column 5, lines 18-25). Both Gray et al and Huberman et al are concerned with effective resource allocation, therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to include a risk cost factor in Gray et al, as seen in Huberman et al, in order to maximize a utility that has an associated risk, such as resource allocation, thus making Gray et al more robust.

17. Claims 29-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gray et al (US 2002/0082856), in view of Wall et al (USPN 6,654,806).

As per claim 29, Gray et al does not disclose said inter-platform protocol comprises a loop avoidance mechanism. Wall et al disclose congestion avoidance and rate control techniques to manage interconnected resources, in order to allow resource traffic to coexist (column 13, lines 24-34). Both Gray et al and Wall et al are concerned with effective resource allocation and movement, therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to include a loop avoidance mechanism in Gray et al, as seen in Wall et al, in order to allow transferred resources to move more efficiently via agent transactions in the Gray et al system.

As per claim 30, Gray et al does not disclose assigning identification data to an instance of resource allocation data and wherein said protocol comprises making passing on said resource allocation data dependent upon a test of said identification data. Wall et al disclose multiple data sources coupled to a data receiver, including identification devices (column 13, lines 54-57). Both Gray et al and Wall et al are concerned with effective resource allocation and movement, therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to include assigning identification data to an instance of resource allocation data in Gray et al, as seen in Wall et al, in order to allow transferred resources to move more efficiently via agent transactions in the Gray et al system.

As per claims 31 and 32, Gray et al does not disclose said identification data is a randomly generated number, said randomly generated number being a relatively large number, thereby to reduce to negligible proportions the probability of two instances being assigned an identical number. Randomly generated numbers are old and well known in the art, therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to include randomly generated numbers in Gray et al, thereby effectively allocating resources via the agents, thus making the Gray et al system more robust.

18. Claims 34, 35, and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gray et al (US 2002/0082856), in view of Zacharia et al (US 2002/0138402 A1).

As per claims 34, Gray et al does not disclose said availability engine also ascertains said amount of said resource to be allocated according to a quality parameter. Zacharia et al, discloses providing multiple levels of quality and uses this to maximize a cost and profit structure ¶ 109. Both Gray et al. and Zacharia et al are concerned with resource allocation, therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to was made to include using quality to determine resources available in Zacharia et al, thereby effectively allocating resources via the transaction, thus making Gray et al allocation engine more robust.

As per claims 35, Gray et al does not disclose said quality parameter comprises a minimum amount of said resources. Zacharia et al, discloses that there are amounts of product available at different quality ¶ 109 and the transactions take place based on required and available amounts as needed ¶ 108. Both Gray et al. and Zacharia et al are concerned with resource allocation, therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to was made to include using quality to determine resources available in Zacharia et al, thereby effectively allocating resources via the transaction, thus making Gray et al allocation engine more robust.

As per claims 36, Gray et al does not disclose said a quality parameter comprises quality of service. Zacharia et al, discloses that the maximum amount of transactions that take place is affected by how quality sensitive the transaction is ¶ 93. Both Gray et al. and Zacharia et al are concerned with resource allocation, therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to was made to include using quality to determine resources available in Zacharia et al, thereby effectively allocating resources via the transaction, thus making Gray et al allocation engine more robust.

19. Claims 37, 38, 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gray et al (US 2002/0082856), in view of Jennings et al. (US 2002/0099842 A1).

As per claims 37, Gray et al does not disclose said availability engine ascertains said amount of said resource to be allocated also according to requesting said resource in advance of use. Jennings et al. discloses that in order to use more network resources a reservation can be sent requesting said resources ¶ 329. Both Gray et al. and Jennings et al. are concerned with resource allocation, therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to was made to include using quality to determine resources available in Jennings et al, thereby effectively allocating resources via the transaction, thus making Gray et al allocation engine more robust.

As per claims 38, Gray et al does not disclose said availability engine ascertains said amount of said resource to be allocated also according to requesting said resource at a non-peak time of use. Jennings et al. discloses that in order to use more network resources time during non-peak hours can be requested ¶ 329. Both Gray et al. and Jennings et al. are concerned with resource allocation, therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to was made to include using quality to determine resources available in Jennings et al, thereby effectively allocating resources via the transaction, thus making Gray et al allocation engine more robust.

As per claims 39, Gray et al does not disclose said resource comprises bandwidth on a network. Jennings et al. discloses bandwidth as a resource that must be monitored and maintained in a network ¶ 252. Both Gray et al. and Jennings et al. are concerned with resource allocation, therefore it would have been obvious to one of ordinary skill in the art at

the time of the invention to was made to include using quality to determine resources available in Jennings et al, thereby effectively allocating resources via the transaction, thus making Gray et al allocation engine more robust.

Conclusion

20. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

-Sabry et al (USPN 6728266) disclose determining a price for use of a particular route.

-Amalfitano (US 2001/0033557) disclose a scheme for assigning priority levels.

-Pitkin et al (USPN 5341477) disclose a broker mechanism that allocates a plurality of servers

-Chellis et al (USPN 6901446) disclose allocating resources.

-Andersson et al (USPN 6434380) disclose a capacity management system.

-Reisman (USPN 7406436 B1) discloses a method and apparatus for collecting, aggregating and providing post sale market data.

-Herz (USPN 6,571,279 B1) discloses a location enhanced information delivery system.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to STEPHEN SWARTZ whose telephone number is (571) 270-7789. The examiner can normally be reached on Monday through Thursday 8:00am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Beth Boswell can be reached on (571) 272-6737. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/SSS/
Patent Examiner, Art Unit 3623
/Jonathan G. Sterrett/
Primary Examiner, Art Unit 3623